



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

William WAYCOTT

Appln. No.: 10/665,029

Filed: September 16, 2003

For: Lettuce Varieties PSR 4569 and PSR  
4570 Having Both Iceberg and  
Romaine Lettuce Characteristics and  
Methods of Making and Using

Art Unit: 1638

Examiner: Keith O'Neal  
Robinson

Confirmation No.: 4492

Atty. Docket: 20612.002/P30632US  
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**APPELLANT'S BRIEF**

**Mail Stop Appeal Brief – Patents**

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Sir:

This is an Appeal from the Final Rejection of all claims pending in the above-referenced patent application. A Notice of Appeal was filed on October 19, 2006. This Brief is filed pursuant to 37 C.F.R. § 41.37.

**1. Real Party in Interest**

The real party in interest is Seminis Vegetable Seeds, a Monsanto Company, having offices at 2700 Camino del Sol, Oxnard, California, 93030.

**2. Related Appeals and Interferences**

Appellant is unaware of any Appeals or Interferences related to this Appeal.

**3. Status of Claims**

Claims 1-3, 5-7, 38, 39, and 41-56 are pending. Claims 4, 8-37, and 40 were previously cancelled without prejudice to or disclaimer of the underlying subject matter. Claims 1-4 and 6-9 stand finally rejected under the judicially created doctrine of obviousness-type double patenting. Claims 1-3, 5-7, and 41-45 are rejected under 35

U.S.C. §112, first paragraph, as allegedly lacking written description. Claims 1-3, 5-9, and 38-45 stand finally rejected under 35 U.S.C. §112, first paragraph, as allegedly lacking enablement. Claims 41-45 stand rejected under 35 U.S.C. §102(b), as allegedly being anticipated, or in the alternative, under 35 U.S.C. § 103(a) as obvious. Appellants appeal the rejections of claims under 35 U.S.C. §112, first paragraph, 35 U.S.C. §§102(b) and 103(a). A copy of the claims on appeal is provided in the “Claims Appendix” attached hereto.

#### **4. Status of Amendments**

Appellant has not filed any amendments to the claims subsequent to Final Rejection in this case.

#### **5. Summary of the Claimed Subject Matter**

Independent Claim 1: The claimed subject matter of independent claim 1 is directed to an iceberg lettuce cultivar, or a part thereof, where the iceberg lettuce cultivar comprises a first outer leaf having a length to width ratio between about 1.2 to about 2.7 and a color which ranges from about RHS 146A to about RHS146B. Specification at page 5, paragraph [00016]; page 9, paragraph [00044] through [00045].

Independent Claim 8: The claimed subject matter of independent claim 8 is directed to a method of producing an iceberg lettuce having a first outer leaf with a length to width ratio of about 1.2 to about 2.7 comprising: a) crossing an iceberg lettuce with a romaine lettuce to produce hybrid seed; b) growing the hybrid seed to produce a hybrid plant; c) selfing the hybrid seed to produce F<sub>2</sub> progeny seed; d) growing the F<sub>2</sub> progeny seed to produce F<sub>2</sub> plants; and e) selecting the F<sub>2</sub> plants for expression of one or more characteristics selected from the group consisting of: length to width ratio greater than 1.0, spatulate leaf shape, semi-open head, and elliptical stature, resistance to corky root rot, resistance to lettuce mosaic virus, and plant height. Specification at page 7, paragraphs [00029] through [00031], page 16, paragraph [00059] through page 18, paragraph [00060] and page 9, paragraph [00044].

## **6. Grounds of Rejection to be Reviewed on Appeal**

The grounds of rejection to be reviewed in this Appeal are<sup>1</sup>:

(a) pending claims 1-3, 5-7, and 41-45 stand rejected under 35 U.S.C. § 112, first paragraph for alleged insufficiency of written description;

(b) pending claims 1-3, 5-9, and 38-45 stand rejected under 35 U.S.C. § 112, first paragraph for alleged lack of enablement; and

(c) pending claims 41-45 stand rejected under 35 U.S.C. § 102(b) for alleged anticipation, or in the alternative under 35 U.S.C. § 103(a) as allegedly obvious.

### **A. Grouping of Claims**

Claims 1-3, 5-7, 38, 39, and 41-56 are pending in this application. All of the claims at issue do not stand or fall together. The separate patentability of claims 41-45, claims 8-9, and claims 38-40, and claims 41-45 is addressed in Sections 7.B(2), 7.C(3), 7.C(4), and 7.C(5), respectively below.

## **7. Argument**

### **A. Summary of Appellants' Position**

Applicants have provided an adequate description of the claimed iceberg lettuce cultivars that demonstrates Applicants' possession of the claimed invention. The genus of claimed cultivars, *e.g.*, the iceberg lettuce cultivar comprising a first outer leaf having a length to width ratio between about 1.2 to about 2.7 and a color which ranges from about RHS 146A to about RHS 146B, for example, has been described by the recitation of a common structural feature – the outer leaf length to width ratio, and its color, respectively – which distinguishes iceberg lettuce cultivars within the claimed genus from plants outside of the claimed genus. Because the specification demonstrates that Applicants have possession of (and have provided an adequate description of) the

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<sup>1</sup> Appellants note that pending claims 1-4 and 6-9 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 8-16 of U.S. Patent No. 6,689,941. Following entry of the terminal disclaimer filed concurrently herewith, the obviousness-type double patenting rejection is moot.

claimed genera of iceberg lettuce plants, the specification satisfies the written description requirement of 35 U.S.C. § 112.

As the specification teaches how to make and use the claimed invention, the specification is enabling. The specification discloses methods for breeding, as well as selection parameters for producing iceberg lettuce plants having the recited characteristics. The specification also provides characteristics of the lettuce cultivars, and exemplifies the production of several iceberg lettuce cultivars having the recited characteristics. As such, the specification is enabled for the claimed invention.

Claims 41-45 and 50 were erroneously rejected as anticipated, or alternatively, as obvious, by a reference that fails to teach the recited hybrid plants. The Examiner has not shown that the cited reference provides hybrids or ancestors of any of lines PSR 6425, PSR 6595, or PSR 6032. Absent a teaching of each and every element of the claims, the reference cited by the Examiner does not anticipate or render obvious the claimed invention.

**B. The Specification Provides An Adequate Written Description of the Claimed Invention**

The adequacy of the written description of the claimed invention of claims 1-3, 5-7 and 41-45 has been challenged by the Examiner because the claimed subject matter was allegedly “not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s)...had possession of the claimed invention.” Final Action at page 3. The Examiner contends that “there is no evidence in the specification that would allow one skilled in the art to conclude that Applicant has possession of all lettuce plants having the claimed characteristics.” *Id.* at page 4. The specification demonstrates to one skilled in the art that Applicants were in possession of the claimed genera of lettuce plants and methods for their production.

**(1) The Specification Reflects Appellants' Possession of the Claimed Invention**

The purpose of the written description requirement is to ensure that the inventor had possession of the claimed subject matter, *i.e.*, to ensure that the inventors actually invented what is claimed. *Gentry Gallery Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479, 45 U.S.P.Q.2d 1498, 1503 (Fed. Cir. 1998); *Lockwood v. American Airlines*, 107 F.3d 1565, 1572, 41 U.S.P.Q.2d 1961, 1966 (Fed. Cir. 1997); *In re Alton*, 76 F.3d 1168, 1172, 37 U.S.P.Q.2d 1578, 1581 (Fed. Cir. 1996). If a person of ordinary skill in the art would, after reading the specification, understand that the inventors had possession of the claimed invention, even if not every nuance, then the written description has been met. *In re Alton*, 76 F.3d at 1175, 37 U.S.P.Q.2d at 1584.

The court determined, in *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 296 F.3d 1316, 1321, 63 U.S.P.Q.2d 1609, 1610 (Fed. Cir. 2002), that the written description inquiry is a factual one determined on a case-by-case basis. *Enzo*, 296 F.3d at 1326-1327, 63 U.S.P.Q.2d at 1615. Furthermore, it is well established that claims “may be broader than the specific embodiment disclosed in a specification. *Ralston-Purina Co. v. Far-mor-Co*, 772 F.2d 1570, 1575, 227 U.S.P.Q. 177, 179 (Fed. Cir. 1985) (*quoting In re Rasmussen*, 650 F.2d 1212, 1215, 211 U.S.P.Q. 323, 326 (C.C.P.A. 1981)). The Federal Circuit has elucidated a test for written description wherein a generic claim may be described by a structural feature that distinguishes members of the claimed genus from non-members of the claimed genus, written description is satisfied. *Regents of the University of California v. Eli Lilly and Co.*, 119 F.3d 1559, 1568-69, 43 U.S.P.Q.2d 1398, 1406 (Fed. Cir. 1997).

The Examiner asserts that “[t]he specification does not allow one skilled in the art to distinguish the claimed invention from any other lettuce plants with the same characteristics”, and accordingly Appellants have allegedly not adequately disclosed the claimed iceberg lettuce plants. Final Action at page 4.

A person of ordinary skill in the art would, after reading the present specification, understand that Appellants had possession of iceberg lettuce cultivars having a first outer

leaf having a length to width ratio between about 1.2 to about 2.7, and a color ranging from about RHS 146A to about RHS 146B, and parts of such cultivars and methods of producing such cultivars. Appellants have provided structural features and characteristics, including leaf structure and color, of the claimed iceberg cultivars. Accordingly, Appellants have demonstrated possession of the claimed invention.

In particular, Appellants have disclosed common structural features, for example iceberg lettuce plants having first outer leaves having a length to width ratio between about 1.2 and about 2.7, and leaf color ranges. *See, e.g.*, specification at page 16, paragraph [00059] through page 18, paragraph [00060]. The specification also discloses first outer leaves, as well as methods for measuring the length to width ratio. *See, e.g.*, specification at page 5, paragraphs [00018] through [00019]. The skilled artisan could readily recognize iceberg lettuce plants within the claimed genus. For example, if a particular iceberg lettuce cultivar contains a first leaf having a length to width ratio between about 1.2 and about 2.7 and has a color in the range from about RHS 146A to about RHS 146B, then it is a member of the claimed genus of iceberg lettuce cultivars. The fact that the cultivars may comprise additional traits or characteristics is beside the point. Such modifications are readily envisioned by one of ordinary skill in the art and disclosed throughout the specification.

Moreover, the present application describes more than just a single embodiment of an iceberg lettuce cultivar having the claimed leaf structure and color. For example, the specification describes iceberg lettuce cultivars having a first outer leaf having a length to width ratio between about 1.2 to about 2.7 (*See, e.g.*, specification at page 9, paragraph [00044]) and describes methods for breeding such cultivars. *See, e.g.*, specification at page 6, paragraph [00026] through page 7, paragraph [00031], and page 10, paragraph [00048] through page 12, paragraph [00052]. Furthermore, the specification exemplifies multiple *L. sativa* cultivars having a first outer leaf having a length to width ratio between about 1.2 and about 2.7 (*See, e.g.*, specification at page 17, Table 3, page 15, Table 2, page 19, Table 4, page 21, Table 5, and page 13, Table 1).

Additionally, the specification also discloses sources of iceberg lettuce plants having corky root resistance and lettuce mosaic virus resistance, and methods for the identification of such resistance (*See, e.g.*, specification at page 8, paragraph [00032] through page 9, paragraph [00039], page 23, paragraph [00070], and page 24, paragraph [00077]). The specification further discloses iceberg lettuce plants having blanched inner leaf colors ranging from about RHS145C to about RHS145D, as well as those also having a semi-open head as described in UPOV guidelines TG/13/7. *See, e.g.*, specification at page 5, paragraph [00021] and page 10, paragraph [00046].

The specification discloses iceberg lettuce plants, including deposited lines PSR6425, PSR4570, and PSR4569, having the claimed leaf structures and leaf colors, and resistance. Based on such disclosure, the skilled artisan can readily distinguish the claimed invention from other lettuce plants. Appellants have satisfied that test for written description, and the written description rejection should be reversed.

## **(2) Appellants Have Described the Claimed Invention of Claims 41-45**

The Examiner asserts that the claimed hybrid plants are not described because “[k]nowing half of the genetic composition of a plant is not an adequate description because a hybrid will possess 50% of the genes of the other parent wherein these genes will play a significant role in the morphological and physiological characteristics of the claimed hybrid.” Final Action at page 5.

As set forth above, Appellants have disclosed the genus of iceberg lettuce cultivars having a first leaf having a length to width ratio between about 1.2 and about 2.7 and has a color in the range from about RHS 146A to about RHS 146B. The specification also discloses iceberg lettuce lines of PSR 6425, PSR 6595, and PSR 6032, and seeds obtained from such lines.

However, the Examiner argues that knowing “half of the genetic composition of a plant is not an adequate description because a hybrid will possess 50% of the genes of the other parent wherein these genes will play a significant role in the morphological and

physiological characteristics of the claimed hybrid.” Final Action at page 5. Contrary to the Examiner’s assertion, the claims do not recite any morphological or physiological characteristics<sup>2</sup>. All that the claims recite is an F<sub>1</sub> hybrid plant or a part thereof, having one or more parents a *L. sativa* L. plant produced by growing a seed of PSR 6425, PSR6595, or PSR 6032. The Examiner has not challenged the adequacy of the description of the parent lines PSR 6425, PSR 6595, or PSR 6032. As the plants of PSR 6425, PSR6595, or PSR 6032 have been described, the subject matter of claims 41-45 are also described.

Thus, contrary to the Examiner’s analysis, claims 1-3, 5-7 and 41-45 are supported by an adequate written description pursuant to the requirements of 35 U.S.C. § 112, and the rejection should be reversed.

### **C. The Claimed Invention is Enabled by the Specification**

#### **(1) Appellants Have Provided A Deposit Statement**

The enablement of the claimed iceberg lettuce cultivars, methods, seeds and hybrids has been challenged. Claims 1-3, 5-9, and 38-45 were erroneously rejected as not enabled by the specification, because of an alleged defect in the deposit statement. Final Action at page 5. The Examiner argues that “the deposit information is incomplete as there is no reference regarding the criteria set forth in 37 C.F.R. 1.801-1.809 or any statement by an attorney of record over his or her signature.” *Id.* at page 6.

A Deposit Declaration was provided in a response in the parent application, U.S. Application Serial No. 09/822,817, dated November 20, 2002. Moreover, the specification indicates that a seed deposit has been made with American Type Tissue Culture.

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<sup>2</sup> Even if the claims did recite the morphological or physiological characteristics, these characteristics are described in the specification.

In addition, Appellants submit concurrently herewith a deposit declaration. As such, this rejection under 35 U.S.C. § 112, as allegedly containing incomplete deposit information should be reversed.

**(2) The Specification Enables the Full Scope of the Claimed Invention**

In addition, the Examiner alleges that the claims are not enabled by the specification commensurate with the scope of the claims. Final Action at pages 6-8. The Final Action asserts that “[o]ne of skill in the art would not know the starting material to produce the claimed invention with the exact characteristics as claimed; therefore, one skilled in the art would have to screen literally thousands of lettuce plants to find which, if any, would have the exact characteristics of the claimed invention.” *Id.* Contrary to the Examiner’s assertion, the specification is enabling for an iceberg lettuce cultivar as claimed.

A specification that discloses how to use a claimed invention “must be taken as in compliance with the enabling requirement of the first paragraph of § 112 unless there is reason to doubt the objective truth of the statements contained therein.” *In re Brana*, 51 F.3d 1560, 1566, 34 U.S.P.Q.2d 1436, 1441 (Fed. Cir. 1995), quoting *In re Marzocchi*, 439 F.2d 220, 223, 169 U.S.P.Q. 367, 369 (C.C.P.A. 1971) (emphasis in original). The present specification indeed discloses how to make and use the present invention, for example by providing methods for breeding iceberg lettuce cultivars having a first outer leaf having a length to width ratio between about 1.2 to about 2.7 and a color in the range from about RHS 146A to about RHS 146B, including pedigree selection methods and selection criteria that can be used in such methods *See, e.g.*, Specification at page 6, paragraph [00026] through page 7, paragraph [00031]. Moreover, the specification describes numerous characteristics of the iceberg lettuce cultivars of the present invention, for example, leaf shape and color, leaf length to width ratio, and disease resistance. *See*, Specification at page 9, paragraph [00042] through page 10, paragraph

[00046]. In addition, the specification provides working examples of the preparation of iceberg lettuce cultivar PSR 6425, as well as other iceberg lettuce cultivars within the genus of claimed iceberg lettuce cultivars. *See, e.g.*, Specification at page 10, paragraph [00048] through page 22, paragraph [00064]. As such, the specification provides ample guidance to the skilled artisan to produce the lettuce plants as presently claimed.

The Examiner has provided neither evidence supporting the rejection nor any explanation of why the specification allegedly fails to enable these plants. *See In re Wright*, 999 F.2d 1557, 1561-62, 27 U.S.P.Q.2d 1510, 1513 (Fed. Cir. 1993); *Ex parte Lemak*, 210 U.S.P.Q. 306, 307 (Bd. App. 1981) (“pure conjecture” does not substantiate rejection for lack of enablement). Therefore, as the specification clearly enables at least the methods of making and using the invention as set forth in the Examples, the enablement requirement has been satisfied. *Cf. Johns Hopkins University v. CellPro*, 152 F.3d 1342, 1361, 47 U.S.P.Q.2d 1705, 1719 (Fed. Cir. 1998) (“the enablement requirement is met if the description enables any mode of making and using the invention”) (emphasis added), *quoting Engel Indus. v. Lockformer Co.*, 946 F.2d 1528, 1533, 20 U.S.P.Q.2d 1300, 1304 (Fed. Cir. 1991).

### **(3) The Specification Enables the Claimed Invention of Claims 8-9**

The specification enables the methods of producing iceberg lettuce plants having the recited leaf length to width ratio. As set forth above, Appellants have disclosed the claimed iceberg lettuce cultivars having a first outer leaf length to width ratio of about 1.2 to about 2.7. Moreover, the specification discloses breeding methods for obtaining iceberg lettuce cultivars having the recited characteristics. *See, e.g.*, Specification at page 10, paragraph [00048] through page 13, paragraph [00054].

The specification further discloses examples of selection methods for identifying plants having the recited characteristics, such as the first outer length to width ratios (*See, e.g.* specification at page 5, paragraph [00019]), spatulate leaf shape (*See, e.g.*,

specification at page 9, paragraph [00042]), semi-open head (*See, e.g.*, specification at page 10, paragraph [00046]), elliptical stature (*See, e.g.*, specification at page 9, paragraph [00042]), resistance to corky root rot (*See, e.g.*, specification at page 7, paragraph [00032] through page 8, paragraph [00036], and Example 5), resistance to lettuce mosaic virus (*See, e.g.*, specification at page 8, paragraph [00037] through page 9, paragraph [00039] and Example 6), and plant height (*See, e.g.*, specification at page 5, paragraph [00022]). The specification also discloses methods for pedigree and hybrid selection. *See, e.g.*, specification at page 6, paragraph [00026] through page 7, paragraph [00030].

The skilled artisan, based on the specification, would be able to produce iceberg lettuce cultivars using the claimed methods without undue experimentation. Accordingly, claims 8-9 are enabled, and the rejection should be reversed.

#### **(4) The Specification Enables the Claimed Invention of Claims 38-40**

The specification enables the seeds of iceberg lettuce lines of PSR 6425, PSR 6595, and PSR 6032. The specification discloses the breeding of these lines from the initial crosses, and identifies the parent lines. *See, e.g.*, specification at page 16, paragraph [00059] through page 22, paragraph [00064], Examples 3-5. The specification also provides morphological and other characteristics selected during these crosses, such as outer leaf shape and color, plant height, and leaf shape. *See, e.g.*, specification at page 17, Table 3, page 19, Table 4, and page 21, Table 5. The specification also further discloses examples of selection methods for identifying plants having the characteristics disclosed for these lines, such as leaf shape and stature. Based on such disclosure, the skilled artisan would be able to obtain the seeds of iceberg lettuce lines PSR 6425, PSR 6595, and PSR 6032, as well as plants or parts of such plants produced by growing such seeds, without undue experimentation.

As such, the iceberg lettuce lines of claims 38-40 are enabled by the specification.

**(5) The Specification Enables the Claimed Invention of Claims 41-45**

The Examiner argues that the “specification does not provide any guidance with regards to the other lettuce plant or plants that are to be crossed with PSR 6425 nor is there any guidance regarding their genetic, morphological, and/or physiological background.” Office Action mailed August 25, 2005 at page 11. As set forth above, Appellants have described the claimed iceberg lettuce cultivars. The skilled artisan, based on the specification, would be able to obtain F<sub>1</sub> hybrids using such cultivars without undue experimentation. It is well established that Applicants need not teach conventional and well-known techniques (*see, e.g., Ajinomoto Co. v. Archer-Daniels-Midland Co.*, 228 F.3d 1338, 1345, 56 U.S.P.Q.2d 1332, 1337 (Fed. Cir. 2000)), which would include lettuce breeding techniques for obtaining F<sub>1</sub> hybrids of the iceberg lettuce cultivars, as well as parameters for selecting parents for use in such techniques. Further, the performance of routine and well-known steps cannot create undue experimentation even if it is laborious. *See In re Wands*, 858 F.2d at 737, 8 U.S.P.Q.2d at 1404; *In re Angstadt*, 537 F.2d 498, 504, 190 U.S.P.Q. 214, 218-219 (C.C.P.A. 1976). Time and difficulty of experiments are not determinative if they are merely routine. M.P.E.P. § 2164.06, page 2100-192. That is, experimentation is not necessarily undue simply because it is complex, if the art typically engages in such experimentation. *See In re Certain Limited-Charge Cell Culture Microcarriers*, 221 U.S.P.Q. 1165, 1174, (Int'l Trade Comm'n 1983) *aff'd. sub nom., Massachusetts Institute of Technology v. A.B. Fortia*, 774 F.2d 1104, 227 U.S.P.Q. 428 (Fed. Cir. 1985).

The Examiner maintains his reliance on Kevern (U.S. Patent No. 5,850,009), Caralone (U.S. Patent No. 5,763,755), Segebart (U.S. Patent No. 5,304,719), and Segebart (U.S. Patent No. 5,367,109) to support the proposition that there is some level of unpredictability in plant breeding involving “factors beyond the breeder’s control.” Final Action at page 7. While the references cited by the Examiner discuss difficulties in

progeny selection in corn breeding programs, the Examiner has still provided no nexus between the cited references relating to corn breeding with iceberg lettuce breeding programs. Accordingly, the Examiner's reliance on the cited references is misplaced.

To the extent that the Office suggests there is a requirement for *a priori* predictability without recourse to any experimentation, that position is without legal support. *Cf. Atlas Powder Co. v. E. I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1576, 224 U.S.P.Q. 409, 413 (Fed. Cir. 1984) ("[t]hat some experimentation is necessary does not preclude enablement"). The proper test of enablement in such a situation is whether the disclosure "adequately guide[s] the art worker to determine, without undue experimentation, which species among all those encompassed by the claimed genus possess the disclosed utility." *See In re Vaeck*, 947 F.2d 488, 496, 20 U.S.P.Q.2d 1438, 1445 (Fed. Cir. 1991). The Examiner relies on Ryder, *et al.* to support the proposition that "epistatic interactions can occur in lettuce cultivars." Final Action at page 8. However, the Examiner does not correlate this alleged epistatic interactions discussed in Ryder to any epistatic interactions between the characteristics of the claimed iceberg lettuce cultivars. Moreover, the Examiner appears to require the Applicants to show that "epistatic interactions do not occur in lettuce breeding." Final Action at page 8. As set forth above, the specification provides ample guidance for the production of the claimed hybrid lettuce plants, parts thereof, and seeds. Even if epistatic interactions occur in lettuce, the skilled artisan would still be able to practice the claimed invention based on the disclosure of the present application as discussed above.

Accordingly, for at least these reasons, the enablement rejection of claims 1-3, 5-9 and 38-56 under 35 USC § 112, first paragraph, is improper and should be reversed.

#### **D. The Claimed Hybrid Plants Are Novel and Non-Obvious**

The claimed invention of *dependent* claims 41-45 and 50 has been challenged by the Examiner under 35 U.S.C. §102(b) because the claims are allegedly anticipated by, or, in the alternative, under 35 U.S.C. § 103(a) as obvious over, Bassett (J. Amer. Soc. Hort. Sci. 100(2): 104-105, 1975) (“Bassett”).

##### **(1) The Claimed F<sub>1</sub> Hybrids are Novel**

In the Final Action, dependent claims 41-45 and 50 were erroneously rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Bassett. The Examiner alleges that “*L. sativa* lines with unspecified breeding partners would not confer a unique characteristic to the claimed hybrids which would distinguish them from the prior art plants.” Final Action at page 8.

For a prior art reference to anticipate in terms of 35 U.S.C. § 102, each and every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990); *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 677, 7 U.S.P.Q.2d 1315, 1317 (Fed. Cir. 1988). Indeed, it is well-established law that an anticipatory reference “must describe the applicant’s claimed invention sufficiently to have placed a person of ordinary skill in the field of the invention in possession of it”. *In re Paulson*, 31 U.S.P.Q.2d 1671 (Fed. Cir. 1994); *In re Spada*, 911 F.2d 705, 708, 15 U.S.P.Q.2d 1655, 1657 (Fed. Cir. 1990). The Office has not demonstrated that Bassett teaches each and every element of the claimed invention, and therefore the anticipation rejection is improper.

The Examiner has not shown that Bassett discloses or even suggests all of the claimed limitations. Bassett *et al.* discloses F<sub>1</sub> and F<sub>2</sub> progeny from crosses between ‘Gallega’ (rosette type) and ‘Minetto’ (crisphead). The instant claims are directed to F<sub>1</sub> hybrids of an *Lactuca sativa L.* plant having as one or more parents a *Lactuca sativa L.* plant grown from the seed of a line selected from PSR 6425, PSR 6595, or PSR 6032. Bassett *et al.* does not disclose any of the lines PSR 6425, PSR 6595, or PSR 6032, nor

any crosses using such lines. As such, Bassett *et al.* does not disclose all of the claimed limitations.

The Examiner argues, however, that “the use of the claimed *L. sativa* lines with unspecified breeding partners would not confer a unique characteristic to the claimed hybrids which would distinguish them from the prior art.” Final Action at page 8. This is not the case however, as the resulting F<sub>1</sub> hybrid would have about half of its genetic material from one of the recited lines, PSR 6425, PSR 6595, or PSR 6032. Having one of the recited lines as a parent confers at least one unique characteristic to the claimed hybrids. Thus, contrary to the Examiner’s assertion, the claimed hybrids would not read on any lettuce plant. As Bassett *et al.* does not disclose or suggest an iceberg lettuce plant grown from seed of lines PSR 6425, PSR 6595, or PSR 6032, it also does not disclose an F<sub>1</sub> hybrid in which at least one of the parents is PSR 6425, PSR 6595, or PSR 6032.

Nor does Bassett *et al.* disclose or suggest an iceberg lettuce cultivar where at least one ancestor is a plant grown from seed of lines PSR 6425, PSR 6595, or PSR 6032, and expresses at least one of the characteristics of a spatulate leaf shape, an elliptical stature or a length to width ratio of about 1.2 to about 1.8. The Examiner has not provided any evidence that Bassett *et al.* discloses a lettuce plant having at least one of its ancestors a plant grown from seed of lines PSR 6425, PSR 6595, or PSR 6032. Nor has the Examiner provided any evidence that the plants disclosed in Bassett *et al.* express at least one of the traits of a spatulate leaf shape, an elliptical stature, or a length to width ratio of about 1.2 to about 1.8.

As Bassett *et al.* does not disclose all of the limitations of claims 41-45 and 50, for at least the reasons set forth, it does not anticipate claims 41-45 and 50. As such, the rejection under 35 U.S.C. § 102(b) should be reversed.

**(2) The Claimed F<sub>1</sub> Hybrids are Not Obvious**

Alternatively, the Examiner has rejected dependent claims 41-45 and 50 under 35 U.S.C. § 103(a) as obvious over Bassett.

For a rejection to be maintained under 35 U.S.C. § 103(a), the Examiner must provide a factually supported *prima facie* case of obviousness. *Manual of Patent Examining Procedure*, Eighth Edition, Fifth Revision, August 2006, 2131. To establish a *prima facie* of obviousness, the Examiner must show, *inter alia*, that all elements of the claims be taught or suggested by the cited reference(s), and that there be some motivation to combine or modify the reference teachings as proposed by the Examiner.

In a proper obviousness determination, the changes from the prior art must be evaluated in terms of the whole invention, including whether the prior art provides any teaching or suggestion to one of ordinary skill in the art to make the changes that would produce the claimed invention. *See In re Chu*, 36 U.S.P.Q.2d 1089, 1094 (Fed. Cir. 1995). This includes what could be characterized as simple changes. *See, e.g., In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) (Although a prior art device could have been turned upside down, that did not make the modification obvious unless the prior art fairly suggested the desirability of turning the device upside down.). Only when the prior art teaches or suggests the claimed invention does the burden fall on the applicant to rebut that *prima facie* case. *See In re Dillon*, 16 U.S.P.Q.2d 1897, 1901 (Fed. Cir. 1990) (in banc), *cert. denied*, 500 U.S. 904 (1991). The cited reference fails to teach or suggest each and every limitation of the claims and, there is no adequate motivation provided that would suggest a modification of the reference teachings so as to arrive at the recited claims.

Claims 41-45 and 50 are drawn to F<sub>1</sub> hybrids and cultivars having as one or more parents a *L. sativa* *L.* plant from lines PSR 6425, PSR 6595, or PSR 6032. The Examiner asserts that “the use of the claimed *L. sativa* lines with unspecified breeding partners

would not confer a unique characteristic to the claimed hybrids which would distinguish them from the prior art plants.” Final Action at page 8.

The Examiner has not provided any evidence that the lettuce plants disclosed in Bassett *et al.* are derived from lines PSR 6425, PSR 6595, or PSR 6032. As discussed above, Bassett *et al.* disclose crosses between ‘Gallega’ (a rosette type) and ‘Minetto’ (a crisphead type). The instantly claimed hybrids have been derived from crosses between iceberg and romaine varieties of lettuce, which were used in breeding methods to obtain lettuce lines including PSR 6425, PSR 6595, and PSR 6032. The claimed hybrids have as one or more parents an iceberg lettuce plant from one of the lines of PSR 6425, PSR 6595, or PSR 6032. As Bassett does not disclose such lines, it likewise does not disclose any F<sub>1</sub> hybrids or other ancestors of these lines. As such, Bassett does not contain all of the elements of claims 41-45 and 50.

For at least these reasons, claims 41-45 and 50 are patentable over Bassett *et al.* As such, the rejection of claims 41-45 and 50 under 35 U.S.C. § 103(a) should be reversed.

## CONCLUSION

In view of the foregoing, it is respectfully requested that the Board of Patent Appeals and Interferences reverse the Rejections and that the subject application be allowed forthwith.

Respectfully submitted,



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Thomas E. Holsten (Reg. No. 46,098)  
David R. Marsh (Reg. No. 41,408)  
ARNOLD & PORTER LLP  
Attn: IP Docketing  
555 Twelfth Street, NW  
Washington, DC 20004-1206  
202.942.5000 telephone  
202.942.5999 facsimile

## 8. Claims Appendix

1. An iceberg lettuce cultivar, or a part thereof, wherein said iceberg lettuce cultivar comprises a first outer leaf having a length to width ratio between about 1.2 to about 2.7 and a color which ranges from about RHS 146A to about RHS146B.
2. The iceberg lettuce cultivar or a part thereof according to claim 1 having a spatulate leaf shape.
3. The iceberg lettuce cultivar or a part thereof according to claim 1 having an elliptical stature.
4. (Cancelled)
5. The iceberg lettuce cultivar or a part thereof according to claim 1, further comprising a blanched inner leaf color, ranging from about RHS 145C to about RHS 145D.
6. The iceberg lettuce cultivar or a part thereof according to claim 1, further comprising a semi-open head.
7. The iceberg lettuce cultivar or a part thereof according to claim 1, further comprising resistance to one or more of the following diseases: corky root and lettuce mosaic virus.
8. A method of producing an iceberg lettuce having a first outer leaf with a length to width ratio of about 1.2 to about 2.7 comprising: a) crossing an iceberg lettuce with a romaine lettuce to produce hybrid seed; b) growing said hybrid seed to produce a hybrid

plant; c) selfing said hybrid seed to produce F<sub>2</sub> progeny seed; d) growing said F<sub>2</sub> progeny seed to produce F<sub>2</sub> plants; and e) selecting said F<sub>2</sub> plants for expression of one or more characteristics selected from the group consisting of: length to width ratio greater than 1.0, spatulate leaf shape, semi-open head, and elliptical stature, resistance to corky root rot, resistance to lettuce mosaic virus, and plant height.

9. The method of claim 8, further comprising: f) crossing said selected plant with itself or another lettuce plant to yield iceberg lettuce progeny seed; g) growing said progeny seed of step (f) under plant growth conditions to yield progeny plants; and h) repeating the crossing and growing steps of (f) and (g) from 0 to 7 times to generate further iceberg lettuce plants which express one or more of the following characteristics selected from the group consisting of: length to width ratio greater than 1.0, spatulate leaf shape, elliptical stature, semi-open head, resistance to corky root rot, resistance to lettuce mosaic virus and plant height.

10.-37. (Canceled)

38. A seed of an iceberg lettuce plant of claim 1, wherein said seed is from a *Lactuca sativa L* line selected from the group consisting of PSR 6425; PSR 6595; and PSR 6032 (American type Culture Collection under accession number PTA-3248).

39. A *Lactuca sativa L.* plant, or a part thereof, produced by growing the seed of claim 38.

40. A *Lactuca sativa L.* plant, or parts thereof, having all the physiological and morphological characteristics of the *Lactuca sativa L.* plant of claim 39.

41. An F<sub>1</sub> hybrid *Lactuca sativa L.* plant, or a part thereof, having as one or more parents a *Lactuca sativa L.* plant of claim 39.

42. A seed produced by growing the hybrid plant of claim 41.
43. An iceberg lettuce cultivar, or a part thereof, wherein at least one ancestor of said lettuce plant is the lettuce plant of claim 39 and wherein said plant expresses at least one of the following traits selected from the group consisting of spatulate leaf shape, elliptical stature and length to width ratio of about 1.2 to about 1.8.
44. The F<sub>1</sub> hybrid cultivar of claim 41, wherein said one or more parents is PSR 6425.
45. The F<sub>1</sub> hybrid cultivar of claim 44 expressing a combination of at least two traits selected from the group consisting of: length to width ratio of about 1.2 to about 1.8, spatulate leaf shape, elliptical stature, semi-open head formation, resistance to corky root rot and resistance to lettuce mosaic virus.
46. The iceberg lettuce cultivar or a part thereof according to claim 5, further comprising a semi-open head.
47. The iceberg lettuce cultivar or a part thereof according to claim 5, further comprising resistance to one or more of the following diseases: corky root and lettuce mosaic virus.
48. An iceberg lettuce cultivar or a part thereof produced by the method of claim 8 wherein said iceberg lettuce cultivar comprises a first outer leaf having a length to width ratio between about 1.2 to about 2.7 and a color which ranges from about RHS 146A to about RHS146B.
49. The iceberg lettuce plant, or a part thereof, according to claim 43, wherein said plant has a spatulate leaf shape, an elliptical stature and a leaf length to width ratio of about 1.2 to about 1.8.

50. The  $F_1$  hybrid plant of claim 45 having a leaf length to width ratio of about 1.2 to about 1.8, a spatulate leaf shape, a semi-open head, and resistance to lettuce mosaic virus.
51. The iceberg lettuce or a part thereof according to claim 48 having a spatulate leaf shape.
52. The iceberg lettuce or a part thereof according to claim 48 having an elliptical stature.
53. The iceberg lettuce or a part thereof according to claim 48, further comprising a blanched inner leaf color, ranging from about RHS 145C to about RHS 145D.
54. The iceberg lettuce or a part thereof according to claim 48, further comprising a semi-open head.
55. The iceberg lettuce or a part thereof according to claim 48, further comprising resistance to one or more of the following diseases: corky root rot and lettuce mosaic virus.
56. An iceberg lettuce cultivar or a part thereof produced by the method of claim 8 wherein said iceberg lettuce cultivar comprises a first outer leaf having a length to width ratio between about 1.2 to about 2.7, a color which ranges from about RHS 146A to about RHS146B, a semi-open head, and resistance to a disease selected from the group consisting of corky root rot and lettuce mosaic virus.

## **9. Evidence Appendix**

None

## **10. Related Proceedings Appendix**

None